"I think, therefore I am" and I'm a postgraduate researcher.

Epistemological conundrums and the muddle of definition.

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University of Bolton Education Subject Group postgraduate and research student activity covers a myriad of topics and the high quality of much of the work deserves wider recognition and an audience, hence the creation of Practice and Research in Education. The papers only represent a very small section of education student research areas being explored but still manage to capture and reflect the vibrancy and breadth of engagement. I hope you enjoy reading them.

The names given to stages of educational provision infer some sort of deepening of engagement: primary, secondary, further and higher. Within 'higher', postgraduate and research levels suggest a further upwards level. But how is this measured or defined? What delineates this supposedly deepest learning from undergraduate study? This conundrum of ordering learning into hierarchies is not a new one, the 1902 Act confirming two systems of state-aided secondary school: the endowed grammar schools, which received grant-aid from LEAs; and the municipal or county secondary schools, maintained by LEAs. The grammar schools were confirmed via the 1938 Spens Report as places for a presupposed educational elite and the die was cast for grammar schools for the academically able, technical schools for those with a practical bent and new 'modern' secondary schools for the rest, a position confirmed by The Norwood Report, Curriculum and Examinations in Secondary Schools. It is worth quoting parts of the report to appreciate the hierarchy and how humankind was to be arbitrarily categorised into divisions of educational status reflecting the assumption of higher and lower states of learning and inherent intelligence. Grammar schools were to attract those who are:
'interested in learning for its own sake, who can grasp an argument or follow a piece of connected reasoning, who is interested in causes, whether on the level of human volition or in the material world, who cares to know how things came to be as well as how they are, who is sensitive to language as expression of thought, to a proof as a precise demonstration, to a series of experiments justifying a principle.' (Norwood 1943:2)

Technical schools catered for:

'the pupil whose interests and abilities lie markedly in the field of applied science or applied art. The boy in this group has a strong interest in this direction and often the necessary qualities of mind to carry his interest through to make it his life work at whatever level of achievement. He often has an uncanny insight into the intricacies of mechanism whereas the subtleties of language construction are too delicate for him.' (Norwood 1943:3)

As to the third group - the majority, which were to become the secondary moderns:

The pupil in this group deals more easily with concrete things than with ideas. He may have much ability, but it will be in the realm of facts. He is interested in things as they are; he finds little attraction in the past or in the slow disentanglement of causes or movements. (ibid)

In such a structure, only the grammar school pupils have the potential for 'higher' learning and therefore university study, the definition swaying towards providing opportunities for those with an innate intelligence to explore the intricacies of the world which other groups are incapable of. Levels of learning and those able to connect to 'higher' forms became ingrained into the education system and it is fascinating that such myths are still accepted and socially divisive grammar schools remain. In such an argument, postgraduate students could only be a minority group, they somehow are able to connect to ideas escaping the majority. In terms of our theme of separating levels of learning, such arbitrary divisions based on speculation and supposition are unhelpful, especially given that the vast majority of present university students, both undergraduate and postgraduate, did not attend a grammar school.

Another angle, connected to presumptions of intelligence and aptitude but this time from a more cultural approach is provided by Peters (1966). His arguments are complex but include the pursuit of understanding as an educative experience defined in normative terms or relativity as to judgements that determine what is of value. Higher learning therefore reflects engagement with cultural priorities which he argues are transient but thematic in that an appreciation and awareness of, for example, an artefact requires appreciation beyond the simple competencies of its production which would be training and framed as a skill and be lower learning. There is then, in such a stance, some sort of hierarchy based upon aesthetic determinants reflecting perhaps a balance towards the assumed or perceived superiority of humanist values above pragmatism or practicality. The challenge is how these are to be

decreed or measured and their values ordered. Unsurprisingly, Peters is unable to quantify such traits except in general terms but the arguments teasingly suggest deeper learning to be part of an intangible process leading towards what he would describe as an ideal.

A major influence in suggesting hierarchies of learning was that of Bloom (1956) and his team which created a taxonomy of learning based around cognitive (mental skills), affective (growth in feelings or emotional areas) and psychomotor (manual or physical skills) domains though the latter was never completed. It was a brave attempt but suffered from the arbitrariness of categorisation which invites simplification and the inevitable subjectivity of interpretation. The model moves towards higher cognition from basic knowledge through comprehension, application, analysis, synthesis and evaluation which is measured as: assessing theories; comparison of ideas; evaluating outcomes; solving; judging; recommending and rating. Interestingly, it's not unusual to see Bloom's verbs used to determine levels in learning outcomes in higher education modules. Some of the issues include the tacit assumption that learning is sequential, logical, linear and ordered; clearly, this is not the case. A simple example that undermines the view that knowledge needs embedding before evaluation could be the wonder of language discovery of a 5 year old child. Children absorb language like an efficient sponge and begin to make some sort of sense of the wonder and complexities of the world and who they are. Names (knowledge) of objects are arbitrary and imagination supplements reality and the supposed higher order of reflection is actually the process of self-realisation and knowledge creation. Also, why can't there be reflection based on supposition, presumption, vague conceptualising or an inkling without clear knowledge? The model is overtly simplistic, little more than a speculative skill set, and resonates to the dominance of the Behaviourist stance of the 1950's. Such a taxonomy again moves towards assuming higher orders of learning and infers reverence for the successful minority. However, some of the terminologies are useful in framing semantic fields of learning discourse

In searching for some sort of understanding as to what separates postgraduate and research study from preceding stages, the arguments presented so far are formulated through hierarchies reflecting the assumption that higher education represents the highest learning and the esteemed pinnacle. Such a view invites the idea that we humdrum beings should leave the complications of society to those best equipped via qualifications to lead and solve on our behalf, a short step to fascism or even eugenics. Hierarchies then appear an inadequate approach and unable to capture the essence of the experience. Better perhaps to begin from the concept that it is the uniqueness of the unravelling of an issue that creates the distinction, the usual 'contribution to knowledge' definition for doctoral study, rather than an arbitrary construction of a learning order? It is interesting to note that almost half of doctoral candidates fail to claim that their theses have contributed to knowledge (Gibney, 2013). The uncovering of the research process has an inevitable aspect of insularity and an expectation from supervisors of increased independence (Gardener, 2008). Grover (2007) sees this as a developmental process of stages of exploration, engagement, consolidation and the final exit of entry (unfortunate term. He means entry as transition to career outcomes). This is a revealing model in that the emphasis is less on subjective interpretations of engagement to one of enhanced self-awareness within an uncovering process informed by insight however determined. Green and Macauley (2007:317) refine this to 'acknowledging when information is needed, acquiring and assessing information, and converting information to knowledge all distinguish essential performances expected of postgraduate students'. Again, the emphasis is upon process informed by self-determination and responsibility coupled with management (Phillips and Pugh, 2010). The student is the catalyst, leader and force in the passion of explaining a new contribution to knowledge which inverts the Bloom cognitive domain, it is knowledge that is at the fore rather than as the starting point. Lastly, as Lovitts (2005) notes, successful undergraduate students don't always make successful research students, many find the transition problematical. This is largely because the balance has shifted from reflecting and exploring the works of others to producing one's own work. It is an important difference.

Each of the papers following have their own style, reflect deep passion and interest, are the result of enquiry and 'contribute to knowledge'. I hope in some way they contribute to yours. Oh, and don't overlook Socrates' observation, 'True knowledge exists in knowing that you know nothing'. That's that then……..

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